# Interpersonal Mindfulness Informed by Functional Analytic Psychotherapy: Findings from a Pilot Randomized Trial

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## **Abstract**

Functional Analytic Psychotherapy (FAP; Kohlenberg & Tsai, 1991) aims to improve interpersonal relationships through skills intended to increase closeness and connection. The current trial assessed a brief mindfulness-based intervention informed by FAP, in which an interpersonal element was added to a traditional intrapersonal mindfulness practice. Undergraduate students (N=104) were randomly assigned to a basic intrapersonal meditation, the same meditation with the addition of a FAP-informed interpersonally-based exercise, or a control group. Follow-up assessments were given at post-intervention, and 48 hours and 2 weeks. Results indicated that for those in the interpersonal group, self-reported connectedness with others in the room increased, and experiential avoidance decreased. However, there were no significant changes in general connectedness with others, mindfulness or intimacy. Future studies might increase the length and depth of this intervention, and assess clinical benefits of adding an interpersonal element to mindfulness-based interventions.

# Kevwords

mindfulness, meditation, interpersonal, functional analytic psychotherapy, experiential avoidance, relationship, intimacy

he literature of the past decade has seen a dramatic increase of studies on clinical benefits of mindfulness practice (Chiesa & Serretti, 2009, 2011; Zgierska et al., 2009) in treating a range of psychological problems, including chronic pain (e.g., Kabat-Zinn, 1990), anxiety (e.g., Orsillo, Roemer, & Barlow, 2003; Hofmann, Sawyer, Witt, & Oh, 2010; Miller, Fletcher, & Kabat-Zinn, 1995), depressive relapse (e.g., Segal, Williams, & Teasdale, 2002; Teasdale et al., 2000), and addictive behaviors (e.g., Bowen & Marlatt, 2009; Brewer, Bowen, Smith, Marlatt, & Potenza, 2010; Vieten, Astin, Buscemi, & Galloway, 2010). Although there are varied definitions and practices based on both historical and contemporary traditions, mindfulness has been described as, "paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally" (Kabat-Zinn, 1994). Meditation instructions typically involve sitting or walking in silence, either in group or individual settings, and attending to one's own immediate, primarily intrapersonal, experience. The current pilot randomized trial assessed the feasibility and efficacy of a brief mindfulness-based intervention informed by Functional Analytic Psychotherapy (FAP; Kohlenberg & Tsai, 1991; Tsai et. al., 2009) in which an interpersonal element was added to traditional practice.

FAP aims to improve interpersonal relationships through an experiential teaching of skills intended to increase closeness and connection with others. FAP focuses on interpersonal factors, positing that a major cause of psychopathology stems from problematic interpersonal relationships (e.g., Horowitz, 2004). One hindrance to improving closeness and connection is avoidance of openness and honesty in interactions with others. From a behavioral perspective, overcoming this avoidance often involves taking a risk by being more honest and open with others (Cor-

dova & Scott, 2001). Termed "courage" in the FAP literature, this risk taking creates the possibility of improved and more satisfying relationships (e. g. Reis & Shaver, 1988; Rubin, Hill, Peplau, & Dunkel-Schetter, 1980). FAP also seeks to increase awareness, which includes the ability to view interpersonal interactions from multiple perspectives, allowing new interpersonal skills to emerge.

The present study used a two-phase intervention to evaluate a brief FAP-informed interpersonal meditation (FAP-IM). FAP-IM integrates intrapersonal mindfulness meditation practices, based on contemporary, secularized mindfulness practices used in therapies such as Mindfulness-Based Stress Reduction (Kabat-Zinn, 1990) and Mindfulness-Based Cognitive Therapy (Teasdale, et al., 2000), with Benson's Relaxation Response (Benson, 1975). Although there is some variation in these practices and their foci, we will refer to here them as "traditional meditation." Phase 1 of the current study focused primarily on breath meditation and relaxation techniques. Instructions included a body scan (becoming aware of physical sensations in the body), and attending to breath (noticing the sensations of the rising and falling of the chest or abdomen). Participants were instructed to notice internal and external stimuli, such as thoughts, feelings, bodily sensations, and sounds. It was suggested that, as best they could, they refrain from judgment, and allow experiences to naturally arise and pass, repeatedly returning attention to the chosen target when their attention wandered. For example, participants practiced bringing attention to the process of thinking. Rather than identifying with the content of thoughts, they were instructed to view them as leaves floating down a stream, observing them as they float in and out of awareness. If their attention was carried away by the content of a thought, they were

instructed to notice the mind had wandered, allow their attention to remain with it for a moment, and then gently return their focus to the chosen focus.

Based on a behavioral analysis of this process, Kohlenberg, Tsai, Kanter, & Parker (2009) concluded that this type of meditation can affect an individual's awareness and shift it to include "being aware that you are aware." In this process, the perception of a given stimulus shifts; in behavioral terms, its discriminative stimulus functions have been altered. If this type of awareness occurs during daily life, the altered stimulus control allows new behavior to occur in situations that have previously elicited a given habitual response. For example, an individual might have the thought, "I am stupid" and respond to its content. As a result of mindfulness training, the same thought might now evoke the realization that, "a thought is arising that is saying 'I'm stupid." The stimulus has changed, providing an opportunity to respond differently. In everyday language, it places the individual in the position of responding to a situation as if it is simply a passing phenomenon, and not necessarily a reflection of the truth, thus providing an opportunity for new learning to occur. Roemer and Orsillo (2002) explain this process as an altering of habitual or automatic maladaptive patterns of behavior due to a shift in perspective that has been called "reperceiving" (Shapiro, Carlson, Astin, & Freedman, 2006) or "decentering" (Teasdale et al., 2000). Kohlenberg and colleagues (2009) suggest that many of the clinical benefits of mindfulness are due to this process.

Phase 2 consisted of FAP-informed instructions intended to bring awareness to the presence of others in the room, in much the same way that perception of thoughts, bodily sensations and sounds were the foci in Phase 1. Participants were guided through an exercise in which they were asked to focus on a close relationship in their life, and bring awareness to ways they tend to communicate in this relationship. They were then asked to expand their awareness to include the others in the room who were engaging in the same practice. They were asked to notice this awareness of others, and then return to focusing on their breath. This was presented as a back-and-forth iterative process, alternating between awareness of others in the room and awareness of inner stimuli. After about 5 minutes, they were given further instructions based on a behavioral cosmology (Tsai et al., 2009, pp 3-14) that describes present experience as being heavily influenced by past interactions with others, going back as far as infancy. Participants were asked to include in their awareness the fact that the others, like themselves, have histories that have shaped who they are and how they perceive themselves and the world. They were asked to contemplate the notion that their peers in the room, like themselves, all have had happiness, sorrow, failures and successes. The intention of this instruction was to facilitate the participants' abilities to take on

Table 1. Participant Demographics by Condition

|                        | Control     | Interpersonal | Intrapersonal | Total Sample |
|------------------------|-------------|---------------|---------------|--------------|
|                        | (n = 39)    | (n = 34)      | (n = 31)      | (N = 104)    |
| Age M (SD)             | 19.18 (.85) | 20.44 (6.76)  | 19.13 (1.26)  | 19.58 (3.97) |
| Gender (Frequency)     |             |               |               |              |
| Male                   | 41.03% (16) | 41.18% (14)   | 48.39% (15)   | 43.3% (45)   |
| Female                 | 58.97% (23) | 58.82% (20)   | 51.61% (16)   | 56.7% (59)   |
| Ethnicity (Frequency)  |             |               |               |              |
| Caucasian              | 46.15% (18) | 44.12% (15)   | 51.61% (16)   | 47.1% (49)   |
| African-American       | 0.00% (0)   | 2.94% (1)     | 6.45% (2)     | 2.9% (3)     |
| Latino/a               | 7.69% (3)   | 5.88% (2)     | 6.45% (2)     | 6.7% (7)     |
| Asian-American         | 28.21% (11) | 38.24% (13)   | 32.26% (10)   | 32.7% (34)   |
| Native American        | 2.56% (1)   | 0.00% (0)     | 0.00% (0)     | 1% (1)       |
| Other                  | 15.38% (6)  | 8.82% (3)     | 3.23% (1)     | 9.6% (10)    |
| Relationship Status    |             |               |               |              |
| Single                 | 64.10% (25) | 64.71% (22)   | 64.52% (20)   | 64.4% (67)   |
| In a Relationship      | 35.90% (14) | 35.29% (12)   | 35.48% (11)   | 35.6% (37)   |
| Mindfulness Experience |             |               |               |              |
| Historical Experience  |             |               |               |              |
| Yes                    | 10.26% (4)  | 14.71% (5)    | 9.68% (3)     | 11.5% (19)   |
| No                     | 89.74% (35) | 85.29% (29)   | 90.32% (28)   | 88.5% (92)   |
| Current Experience     |             |               |               |              |
| Yes                    | 15.38% (6)  | 14.71% (5)    | 22.58% (7)    | 18.3% (19)   |
| No                     | 84.62% (33) | 85.29% (29)   | 77.42% (24)   | 81.7% (85)   |

the perspective of others, and to place themselves in the others' shoes. This process, according to theory of mind (Flavell, 1999), accounts for such traits as empathy and compassion. In FAP, these latter are subsumed in the category of "love."

In the final part of phase 2, it was suggested to participants that everyone tends to have "comfort zones" when interacting with others that set the boundaries for openness and honesty, and that vary based on contextual factors (e.g., the person with whom they are interacting). Participants were asked to consider that relationships may improve and become more satisfying with increased openness, but that it often takes courage to step outside of habitual patterns of interaction. This "stepping outside" may be experienced as "risky;" thus many people tend to stay within their comfort zones. Participants were then asked to think about a particular relationship in their lives and what they might say to this person that would constitute a small step or a risk, i.e., something just outside of their comfort zone. The attention to context and "small steps" in this process is based on the behavioral principles of shaping and functional analysis. After approximately 5 minutes of participating in this contemplation, they were asked to return awareness to their breath for several minutes, and then to gradually allow their eyes to open, and, if they wished to do so, briefly speak (for about 30 seconds to a minute) to one another in small groups about the relationship they had thought about, and what "small step" they envisioned taking, acknowledging that speaking to the group might be a risk or step outside their comfort zone. This last step is based on the FAP principle that in-vivo practice of a target behavior, i.e., taking small risks, can have generalized clinical benefits in behavior outside of session.

We hypothesized that participants in both the intrapersonal and interpersonal groups would have significantly higher scores on mindfulness as measured by the MAAS than those in the control group. We predicted that scores in the interpersonal group would be higher than both the intrapersonal and control groups on measures of social connectedness, intimacy, and post-intervention ratings of connectedness with others in the room. Finally, having participated in an imaginal rehearsal of interpersonal risk taking, and having interacted with others in the groups in a way that potentially challenged their comfort zones, we predicted that participants in the interpersonal group would score significantly lower than the intrapersonal and control groups on experiential avoidance as measured by the AAQ. Measures of positive and negative affect were included for exploratory purposes.

## METHODS

## **PARTICIPANTS**

Participants in the current study were undergraduate students (N=104), at least 18 years old, who were enrolled in a lower level psychology class at a major university. They were recruited through a departmental online posting board. All procedures were approved by the university Institutional Review Board. See Table 1 for a detailed description of participant characteristics.

### **PROCEDURE**

Participants signed up for one of several prescheduled time slots, with 6 to 11 participants included in each slot. Slots were then randomized to 1 of 3 treatment conditions: interpersonal, intrapersonal, or control. Conditions were balanced across time of day and day of the week. Participants were unaware of which condition the time slots represented when they arrived at the lab. They received up to 3 hours of course credit for their participation.

Groups of 6 to 11 participants met a research assistant in the waiting room during the pre-established time slot. The research assistant then guided the group of participants to a nearby group room where they were checked in, seated, and provided with a consent form. Once formal consent was obtained, paper-andpencil baseline measures were administered. After completion of the baseline assessment, which lasted approximately 30 minutes, participants were introduced to the session interventionist and participated in 1 of the 3 conditions. Following the laboratory session, participants completed a post-course assessment, which lasted approximately 30 minutes, and were reminded of the upcoming web-based follow-up surveys. Follow-up assessments were administered online 48 hours and 2 weeks following the laboratory session. Participants were sent an email containing a website link to the follow-up assessment, designed to take less than 30 minutes to complete.

#### INTERVENTIONS

The intrapersonal and interpersonal groups both included Phase 1, described above, consisting of intrapersonally-based meditation instructions. Participants in the interpersonal group were then given Phase 2 instructions, in which they reflected on an interpersonal relationship, imagined taking a small step out of their comfort zones in communicating with this person, and then participated in a small group discussion about their experience. Participants assigned to the control group watched a 50-minute nature video on the topic of trees.

### **MEASUREMENT**

A variety of assessments were used in the study to measure changes in connectedness, intimacy, acceptance, well-being and mindfulness among the three conditions. All assessments were completed at baseline, post-course, 48 hours and 2 weeks after the intervention unless otherwise noted.

Descriptives. At baseline, participants provided demographic and background information such as age, gender, ethnicity and relationship status. The Mindfulness Experiences Questionnaire was used to assess past and current experience with mindfulness meditation.

Affect. The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) was used to monitor change in affect at all 4 assessment time points (baseline, post-course, 48 hour and 2 week follow-up). The PANAS consists of 20 emotion words: 10 positive (e.g. "proud") and 10 negative (e.g. "nervous"). Participants rated their present experience of each emotion on a scale from 1 ("very slightly/not at all") to 5 ("extremely"). The PANAS has strong psychometric properties and high reliability (Molloy, Pallant & Kantas, 2001). Reliability in the current study was alpha .82.

Table 2. Means (SDs) on Assessment Measures at Four Time Points by Treatment Groups and Control

|                       | <b>Control</b> ( <i>n</i> = 39) Mean (SD) | Interpersonal<br>(n = 34)<br>Mean (SD) | Intrapersonal<br>(n = 31)<br>Mean (SD) | Total Sample (N = 104) Mean (SD) |
|-----------------------|---|--|--|----------------------------------|
| MAASa                 |   |  |  |                                  |
| Baseline              | 3.83 (.66)                                | 3.77 (.71)                             | 3.92 (.72)                             | 3.84 (.69)                       |
| Post Course           | 3.84 (.69)                                | 3.70 (.73)                             | 3.89 (.83)                             | 3.81 (.75)                       |
| 48 Hour               | 3.85 (.73)                                | 3.99 (.79)                             | 4.13 (.68)                             | 4.00 (.73)                       |
| Two Week              | 3.77 (.70)                                | 4.12 (.99)                             | 4.30 (.80)                             | 4.04 (.85)                       |
| AAQ <sup>b</sup>      |   |  |  |                                  |
| Baseline              | 5.20 (1.14)                               | 4.61 (1.25)                            | 5.12 (.96)                             | 4.98 (1.15)                      |
| Post Course           | 5.20 (1.12)                               | 4.98 (1.33)                            | 5.28 (.99)                             | 5.15 (1.15)                      |
| 48 Hour               | 4.95 (1.12)                               | 4.90 (1.16)                            | 5.28 (.88)                             | 5.05 (1.04)                      |
| Two Week              | 5.18 (1.08)                               | 4.85 (1.26)                            | 5.46 (.61)                             | 5.14 (1.06)                      |
| PANAS <sup>c</sup>    |   |  |  |                                  |
| Positive              |   |  |  |                                  |
| Baseline              | 3.07 (.77)                                | 3.13 (.69)                             | 3.06 (.69)                             | 3.09 (.72)                       |
| Post Course           | 2.96 (.88)                                | 3.14 (.69)                             | 3.10 (.82)                             | 3.06 (.80)                       |
| 48 Hour               | 3.16 (.86)                                | 3.19 (.77)                             | 3.15 (.82)                             | 3.17 (.80)                       |
| Two Week              | 3.18 (.61)                                | 3.09 (.69)                             | 3.46 (.90)                             | 3.22 (.73)                       |
| Negative              |   |  |  |                                  |
| Baseline              | 2.06 (.69)                                | 2.18 (.81)                             | 2.05 (.74)                             | 2.10 (.73)                       |
| Post Course           | 1.95 (.67)                                | 1.81 (.72)                             | 1.83 (.80)                             | 1.87 (.72)                       |
| 48 Hour               | 2.04 (.59)                                | 2.04 (.75)                             | 1.95 (.78)                             | 2.01 (.71)                       |
| Two Week              | 2.07 (.61)                                | 2.05 (.93)                             | 1.97 (.89)                             | 2.04 (.80)                       |
| Intimacy Scale*       |   |  |  |                                  |
| Baseline              | 4.82 (.95)                                | 4.30 (1.07)                            | 4.62 (1.05)                            | 4.59 (1.04)                      |
| 48 Hour               | 4.25 (.90)                                | 4.19 (1.32)                            | 3.94 (1.22)                            | 4.12 (1.16)                      |
| Two Week              | 4.36 (1.26)                               | 4.21 (1.24)                            | 4.66 (1.22)                            | 4.39 (1.23)                      |
| SCS <sup>d</sup>      |   |  |  |                                  |
| Baseline              | 4.60 (.77)                                | 4.35 (.83)                             | 4.66 (.78)                             | 4.53 (.80)                       |
| Post Course           | 4.71 (.72)                                | 4.55 (.79)                             | 4.70 (.75)                             | 4.65 (.75)                       |
| 48 Hour               | 4.45 (.85)                                | 4.48 (.84)                             | 4.54 (.83)                             | 4.49 (.83)                       |
| Two Week              | 4.60 (.83)                                | 4.41 (.98)                             | 4.69 (.79)                             | 4.56 (.87)                       |
| BMSSCS <sup>e**</sup> |   |  |  |                                  |
| Baseline              | 3.21 (.76)                                | 3.31 (1.00)                            | 2.97 (.78)                             | 3.17 (.85)                       |
| Post Course           | 3.35 (.83)                                | 3.65 (.98)                             | 3.17 (.92)                             | 3.39 (.92)                       |

<sup>&</sup>lt;sup>a</sup> MAAS = Mindfulness Attention Awareness Scale, <sup>b</sup> AAQ = Acceptance and Action Questionnaire, <sup>c</sup> PANAS = Positive and Negative Affect Schedule, <sup>d</sup> SCS-R = Social Connectedness Scale - Revised, <sup>e</sup> BMSSCS = Brief Mindfulness Study Social Connectedness Scale

Experiential Avoidance. The Acceptance and Action Questionnaire (AAQ-2, Bond et al., 2011) is a 10-item was used to measure experiential avoidance, which can be defined as negative evalua-

tion of or unwillingness to maintain contact with internal experiences. Participants rate each statement (e.g., "I am in control of my life") on a scale from 1 ("never true") to 7 ("always true").

<sup>\*</sup> The Intimacy Scale was not given at post course

<sup>\*\*</sup> The BMSCS was only given at baseline and post course

The AAQ-2 has strong psychometric and reliable properties (Bond et al., 2011). The current study demonstrated a high reliability (alpha = .89).

Mindfulness. The Mindfulness Attention Awareness Scale (MAAS, Brown & Ryan, 2003) is a 15-item scale used to assess trait mindfulness, defined as an open or receptive awareness to present moment experiences. Participants rated the frequency of each mindfulness statement (e.g., "I find it difficult to stay focused on what's happening in the present") on a scale from 1 ("almost always") to 6 ("almost never"). The MAAS has exhibited strong psychometric properties (MacKillop & Anderson, 2007), also demonstrated in the current study (alpha = .84).

Intimacy. The two-part Intimacy Scale (Kanter, unpublished) was used to monitor change in intimacy as it relates to the participant and the "target person." Part one includes a series of questions used to help the participant select the "target person" and provide background information on the relationship. Part 2 is comprised of 14 items related to the intimacy between the participant and the "target person." Participants rated intimacy items (e.g., "I expressed loving, caring feelings toward this person") on a scale from 0 ("not at all") to 6 ("completely") based upon interactions with the "target person" in a given time frame (e.g., past 48 hours). The scale demonstrated high reliability in the current study (alpha = .82).

Connectedness. Two versions of a social connectedness scale were used. The Social Connectedness Scale – Revised is a 20-item scale assessing a person's feelings of connectedness to society as a whole. Participants rated statements (e.g., "I feel comfortable in the presence of strangers") on a scale from 1 ("strongly disagree) to 6 ("strongly agree"). SCS-R has demonstrated high reliably and has strong psychometric qualities (SCS-R, Lee, Draper & Lee, 2001). The scale demonstrated high reliability in the current study (alpha = .91).

The Brief Mindfulness Study Social Connectedness Scale (BMSSCS) is a 14-item scale that examines connectedness to the other participants in the room. It was derived from the Campus Connectedness Scale (CCS, Lee, Draper & Lee, 2001), modifying the CCS items to relate to "in room" experiences, rather than experiences of campus life. Participants rated statements (e.g., "I can relate to other people in this room") on a scale from 1 ("strongly disagree) to 6 ("strongly agree"). The BMSCS also demonstrated high reliability in the current study (alpha = .89).

On the Single Item Connectedness Scale (SICS, Kohlenberg, unpublished) participants rated one question, "How connected do you feel to others in the room?" on a scale ranging from 0 ("not at all") to 6 ("completely"). The SICS was administered at baseline and post-course.

*Manipulation check.* The manipulation check was administered post-intervention, and consisted of a single item ("To what extent do you feel were you engaged in the session's activities?") and was asked at post-course.

## **DATA ANALYSES**

Descriptive analyses were conducted to assess demographic characteristics of the sample. Baseline differences on key demographic and outcome variables were assessed using independent sample *t*-tests. ANCOVAS were used to assess differences

between groups at the post-intervention and follow-up time points on connectedness, mindfulness, intimacy, positive and negative affect, and experiential avoidance, with baseline levels of outcome variables covaried. Where omnibus tests were significant, post hoc multiple comparisons were used to determine between which groups the significant differences occurred.

Only cases with complete data for the relevant time points were included in analyses. All analyses were conducted using SPSS 16.0.

# **■ RESULTS**

Sixty-nine participants completed 48-hour follow-up assessment, and 54 participants completed the final 2-week follow-up assessment. Forty-two participants completed all phases of the study. Tests for outliers and normality of distributions for primary variables of interest showed all variables were in the acceptable range. Comparisons between groups revealed no significant differences at baseline on key demographic or primary outcome variables, with the exception of a trend towards baseline differences on the Intimacy Scale F(2, 99)=2.36, p=.099. Tukey HSD test revealed a trend (p = .082) towards higher scores in the control (M=4.82, SD=.945) versus the interpersonal group (M=4.30, SD=1.07). As a conservative measure, this variable was covaried in all subsequent analyses.

Omnibus tests revealed significant between-group differences on measures of connectedness and experiential avoidance. Significant differences were found on the single-item postcourse measure of connectedness, F(2.97) = 5.34, p = .006. Specifically, post hoc Tukey HSD test revealed differences between control and both the intrapersonal (p = .018) and interpersonal group (p = .003).

Significant differences were found on the AAQ at post-intervention, F(2, 97) = 5.65, p = 005, specifically between the control and interpersonal group (p = .001). Between group differences remained significant at the 48-hour follow-up F(2, 61) = 4.67, p = .013, with differences maintained between the control and interpersonal group (p = .031). Although trending towards significance, significant differences were not retained at the 2-week follow-up (p = .068). No significant between-group differences were found on follow-up measures of Intimacy, Mindfulness or Social Connectedness (see Table 2 for means on all outcome variables).

# DISCUSSION

The current study was designed to develop and test a brief interpersonally-informed mindfulness-based intervention intended to improve communication and intimacy in primary relationships by reducing interpersonal risk avoidance and expanding participants' interpersonal boundaries. Contrary to hypotheses, results did not reveal significant between-group differences in mindfulness as measured by the MAAS, nor for measures of social connectedness or intimacy. However, post-intervention ratings on the self-report assessment of connectedness to others in the room were significantly higher for both the intra- and interpersonal groups as compared to the control group. Additionally, the control and interpersonal groups differed significantly

on AAQ at post-intervention and 48-hour follow-up, with the interpersonal group scoring lower on experiential avoidance.

The lack of between-group differences on measures of mindfulness, social connectedness and intimacy may be due to the brevity of the intervention. Lengthening the intervention or providing multiple sessions might allow participants more extensive in-session practice, and provide opportunities and support to practice outside of session.

Reports of connectedness to others in the room were significantly higher for participants in both intra- and interpersonal groups as compared to those in the control group. Although participants in the intrapersonal group did not engage with one another in the same fashion as those in the interpersonal group, having an intrapersonally-based experience in the company of others may increase a sense of connectedness with them, even if there is no interpersonal interaction, per se.

The significant between-group differences in experiential avoidance between the interpersonal and control groups might be reflective of either the imaginal interpersonal risk-taking in Phase 2 of the intervention, or of the group discussions wherein participants took in-vivo risks with their peers by sharing their experiences. Future studies would benefit by isolating and testing these components separately to determine if either is predicting changes in avoidance.

The current study has several limitations to consider. First, baseline and post-intervention measures were given in person via paper-and-pencil administration, whereas the follow-up measures were given online. Although research suggests these methods yield similar outcomes (Fouladi, 2002), consistency in administration would limit potential confounds. Secondly, because the sample was drawn from non-treatment seeking undergraduate students, who may differ in important ways from the population at large, findings may not generalize to other populations. Future research utilizing this intervention design with larger and diverse samples is warranted.

Despite the limitations and its pilot nature, the current study offers a novel contribution to the literature. Although research on meditation has included a focus on several intrapersonal practices and outcomes, only a handful of studies have included a focus on interpersonal practices and factors. For example, Carson, Gil, & Baucom (2004) taught meditation practices in a couples context, and Cohen and Miller (2009) included interpersonal awareness and dyadic interactions in a study of a cohort of clinical psychology graduate students. In both cases, the training was far more extensive than the one-hour FAP-IM in the current study, exceeding 20 hours of mindfulness training. Further, research suggests that traditional intrapersonal meditation alone is related to improved interpersonal functioning (Barnes, Brown, Krusemark, Campbell, & Rogge, 2007; Block-Lerner, Adair, Plumb, Rhatigan, & Orsillo, 2007; Dekeyser, Raes, Leijssen, Leysen, & Dewulf, 2008; Wachs & Cordova, 2007). Finally, it is of interest to note that the Buddhist practice of Insight Dialogue (Kramer, 2007) combines standard intrapersonal meditation with mindful engagement in dialogue with others, although the methods of Insight Dialogue are not intended to be a clinical treatment; instead they are taught in the context of a spiritual path cultivating wisdom and compassion.

Future studies might assess whether increasing the length and depth of the current intervention would yield positive effects on mindfulness, intimacy and connectedness, and lead to a long-term decrease in experiential avoidance. Similarly, future research on mindfulness-based interventions might assess clinical benefits of adding an interpersonal element to an intrapersonally-based meditation protocol. Although the study of interpersonally-based mindfulness interventions is in its early stages, the decreases in experiential avoidance following a one-hour intervention suggests potential for brief interpersonal mindfulness interventions to affect the willingness of individuals to engage in behaviors that may lead to more satisfying intra-and interpersonal experiences.

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